ELSEVIER

Environmental and Experimental Botany 49 (2003) 295–297

Environmental and Experimental Botany

www.elsevier.com/locate/envexpbot

# Contents of Volume 49

**VOLUME 49, ISSUE 1** **FEBRUARY 2003**

The effect of enhanced ultraviolet-B radiation on growth, photosynthesis and stable carbon isotope composition ($\delta^{13}C$) of two soybean cultivars (*Glycine max*) under field conditions
H. Feng, L. An, T. Chen, W. Qiang, S. Xu, M. Zhang, X. Wang and G. Cheng (Lanzhou, PR China) 1

Sap flow of several olive trees estimated with the heat-pulse technique by continuous monitoring of a single gauge
P. Giorio (Ercolano, Italy) and G. Giorio (Metaponto, Italy) 9

Phytochelatin and cadmium accumulation in wheat
J. P. Stolt (Alnarp, Sweden), F. E. C. Sneller (Amsterdam, The Netherlands), T. Bryngelsson, T. Lundborg (Alnarp, Sweden) and H. Schat (Amsterdam, The Netherlands) 21

Differences in ozone response between two Finnish wild strawberry populations
S. Manninen (Helsinki, Finland; Gothenburg, Sweden), N. Siivonen, U. Timonen and S. Huttunen (Oulu, Finland) 29

Elicitation of soluble phenolics in date palm (*Phoenix dactylifera*) callus by *Fusarium oxysporum* f. sp. *albedinis* culture medium
F. Daayf (Winnipeg, MB, Canada), M. El Bellaj, M. El Hassni, F. J'Aiti and I. El Hadrami (Marrakech, Morocco) 41

Nutrient availability and the effect of increasing UV-B radiation on secondary plant compounds in Scots pine
A. Lavola, P. J. Aphalo, M. Lahti and R. Julkunen-Tiitto (Joensuu, Finland) 49

Alterations in the rhizobacterial community associated with European alder growth when inoculated with PGPR strain *Bacillus licheniformis*
B. Ramos, J. A. L. García, A. Probanza, M. L. Barrientos and F. J. Gutierrez Mañero (Madrid, Spain) 61

Photosynthesis and activity of superoxide dismutase, peroxidase and glutathione reductase in cotton under salt stress
D. A. Meloni, M. A. Oliva, C. A. Martinez and J. Cambraia (Viçosa, Brazil) 69

Occurrence of cytokinin-like compounds in two aquatic ferns and their exudates
W. A. Stirk and J. van Staden (Scottsville, South Africa) 77

Guide for Authors 87

**VOLUME 49, ISSUE 2** **APRIL 2003**

Paraheliotropism in two *Phaseolus* species: combined effects of photon flux density and pulvinus temperature, and consequences for leaf gas exchange
D. G. Bielenberg, J. D. Miller and V. S. Berg (Cedar Falls, IA, USA) 95

doi:10.1016/S0098-8472(03)00027-3

Solute accumulation and distribution during shoot and leaf development in two sorghum genotypes under salt stress
C. F. de Lacerda (Fortaleza, Brazil), J. Cambraia, M. A. Oliva, H. A. Ruiz (Viçosa, Brazil) and J. T. Prisco (Fortaleza, Brazil) 107

Response of photosynthetic plasticity of *Paeonia suffruticosa* to changed light environments
S. Zhang, K. Ma and L. Chen (Beijing, People's Republic of China) 121

Photosynthesis and PSII functionality of drought-resistant and drought-sensitive weeping lovegrass plants
M. R. Colom and C. Vazzana (Firenze, Italy) 135

Salinity–sodicity induced changes in reproductive physiology of rice (*Oryza sativa*) under dense soil conditions
M. A. Khan and Z. Abdullah (Islamabad, Pakistan) 145

Comparative effects of four herbicides on non-photochemical fluorescence quenching in *Lemna minor*
C. Frankart, P. Eullaffroy and G. Vernet (Reims, France) 159

Enhancement of photosynthesis and growth of an aridland perennial in response to soil nitrogen pulses generated by mule deer
M. S. Peek and I. N. Forseth (College Park, MD, USA) 169

Manganese toxicity in epiphytic lichens: chlorophyll degradation and interaction with iron and phosphorus
M. Hauck, A. Paul, S. Gross (Göttingen, Germany) and M. Raubuch (Witzenhausen, Germany) 181

Acknowledgements 193

**VOLUME 49, ISSUE 3** **JUNE 2003**

Chromium interference in iron nutrition and water relations of cabbage
N. Pandey and C. P. Sharma (Lucknow, India) 195

Deuterium labelling of roots provides evidence of deep water access and hydraulic lift by *Pinus nigra* in a Mediterranean forest of NE Spain
J. Peñuelas and I. Filella (Barcelona, Spain) 201

Growth and physiological responses of two mangrove species (*Bruguiera gymnorrhiza* and *Kandelia candel*) to waterlogging
Y. Ye (Kowloon, Hong Kong; Fujian, People's Republic of China), N. F. Y. Tam, Y. S. Wong (Kowloon, Hong Kong) and C. Y. Lu (Fujian, People's Republic of China) 209

Defense/stress responses elicited in rice seedlings exposed to the gaseous air pollutant sulfur dioxide
R. Rakwal (Ibaraki, Japan), G. K. Agrawal (Kathmandu, Nepal), A. Kubo, M. Yonekura (Ibaraki, Japan), S. Tamogami (Akita, Japan), H. Saji and H. Iwahashi (Ibaraki, Japan) 223

Copper toxicity to five *Parmelia* lichens in vitro
J. P. Cabral (Porto, Portugal) 237

Nickel contamination affects growth and secondary metabolite composition of St. John's wort (*Hypericum perforatum* L.)
S. J. Murch (Guelph, Canada), K. Haq (Red Deer, Canada), H. P. V. Rupasinghe and P. K. Saxena (Guelph, Canada) 251

Elevated growth $CO_2$ delays drought stress and accelerates recovery of rice leaf photosynthesis
W. Widodo, J. C. V. Vu, K. J. Boote (Gainesville, FL, USA), J. T. Baker (Beltsville, MD, USA) and L. H. Allen Jr. (Gainesville, FL, USA) 259

Extraction methods for assessing the availability of cations for epiphytic lichens from bark
M. Schmull and M. Hauck (Göttingen, Germany) 273

Mineral elements and phytase activity in *Pisum sativum* grown at different Zn supply levels in the greenhouse
A. E. A. Päivöke (Helsinki, Finland) 285

Contents of Volume 49 295